

REMARKS

Claims 18 and 20 have been amended. Claim 19 has been canceled.

The Examiner has objected to claim 18 as informal due to a certain passage in the claims said by the Examiner to be confusing. Applicant has amended claim 18 as above set forth to change this passage to conform to the substance of the Examiner's interpretation of the passage, thereby obviating the Examiner's objection.

The Examiner has rejected applicants' claims 18-22, 24-29, 31 and 33-37 under 35 USC 103(a) as unpatentable over the Nickols patent (US Patent No. 4,609, 595) taken with the Isobe reference (Japanese Publication 05-335024). The Examiner has further rejected applicants' claim 30 also under 35 USC 103(a) based on the latter two references taken with the Gionfriddo patent (US Patent No. 4,689,280) as evidenced by the Electronic Space Products International(ESPI). With respect to applicants' claims, as amended, these rejections are respectfully traversed.

Applicants' independent claim 18 has been amended to better define applicants' invention. In particular, claim 18 now recites a fuel cell for use in a fuel cell stack, said fuel cell having a plate structure defining an active fuel cell area and a wet seal area bordering said active fuel cell area, wherein two opposite edges of said plate structure fold over a first surface of said plate structure forming two flanges adjacent said first surface of said plate structure, each of said flanges comprising a flat section spaced apart from and parallel to said first surface of said plate structure, said wet seal area including the region between a flat section of a first one of said two flanges and a first portion of said first surface of said plate structure opposite that flat section and said active fuel cell area including a second portion of said first surface extending from said first portion of said first surface, said fuel cell further comprising: a

corrugated current collector abutting and in contact with said active fuel cell area on said second portion of said first surface, said corrugated current collector extending into said region included in said wet seal area on said first portion of said first surface and being spaced from said flat section of said first one of said two flanges; an electrode abutting said current collector over a region which excludes the region of said current collector extending into said wet seal area; a compliant member abutting and in contact with said current collector, said compliant member comprising a planar body member, wherein sections cut out of the planar body member at locations within the periphery of said planar body member extend outwardly of the plane of the planar body member, said sections of said planar body member imparting compliance to said compliant member, and wherein said planar body member is dimensioned such that the periphery of said planar body member is within said wet seal area; and further wherein said sections are arranged in a plurality of rows which are spaced along the width and extend along the length of said planar body member; and said compliant member being in said wet seal area in the space between the corrugated current collector and the flat section of said first one of said two flanges.

In applicants' fuel cell, therefore, the wet seal area includes the region between a flat section of a first one of the two flanges of the plate structure and a first portion of the first surface of the plate structure opposite that flat section. The current collector of the fuel cell is corrugated and extends into the aforesaid region included in the wet seal area on the first portion of the first surface and is spaced from the flat section of the first one of the two flanges. Finally, the compliant member with sections cut out of the planar body member and arranged in a plurality of rows which are spaced along the width and extend along the length of said planar

body member is in the wet seal area in the space between the corrugated current collector and the flat section of the first one of the two flanges.

None of the cited references teaches or suggest this construction. In the Nickols patent, the channels 16A and 14A of the flanges 16 and 14 are entirely filled with the laminated sheets 19 and 21 (Col. 4, lines 37-46; FIG. 2). Moreover, the corrugated current collector 66 does not extend into the channels 16A and 14A (Col. 4, lines 49-54; FIG. 2). Similarly, in the Isobe publication, the member 14 likewise entirely fills the wet seal area between the flat section of the flange 13 and the first surface of the supporting plate structure, while the current collector 6 does not extend into the wet seal area (FIG. 22).

These references thus alone or in combination fail to teach or suggest the above-recited features of applicants' amended claim 18, and its dependent claims, and, in particular, "[a] wet seal area including the region between a flat section of a first one of said two flanges and a first portion of said first surface of said plate structure opposite that flat section . . . a corrugated current collector. . . extending into said region included in said wet seal area on said first portion of said first surface and being spaced from said flat section of said first one of said two flanges . . . a compliant member abutting and in contact with said current collector, said compliant member comprising a planar body member, wherein sections cut out of the planar body member . . . imparting compliance to said compliant member . . . said sections are arranged in a plurality of rows which are spaced along the width and extend along the length of said planar body member; and said compliant member being in said wet seal area in the space between the corrugated current collector and the flat section of a first one of said two flanges."

The other references cited by the Examiner, the Gionfriddo patent and Electronic Space

Products International, add nothing to the Nickols patent and the Isobe publication to change this conclusion.

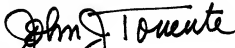
In this regard, it is noted that the Gionfriddo patent teaches a construction in which the corrugations 56a of a corrugated plate 16 fit within U-shaped channels at the ends of a plate 54. Again there is no teaching or suggestion of “[a] wet seal area including the region between a flat section of a first one of said two flanges and a first portion of said first surface of said plate structure opposite that flat section . . . a corrugated current . . . extending into said region included in said wet seal area on said first portion of said first surface and being spaced from said flat section of said first one of said two flanges . . . a compliant member abutting and in contact with said current collector, said compliant member comprising a planar body member, wherein sections cut out of the planar body member . . . imparting compliance to said compliant member . . . said sections are arranged in a plurality of rows which are spaced along the width and extend along the length of said planar body member; and said compliant member being in said wet seal area in the space between the corrugated current collector and the flat section of a first one of said two flanges”, as recited in applicants’ amended claim 18, and its respective dependent claims.

In view of the above, it is submitted that applicants’ claims, as amended, patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims is respectfully requested.

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Respectfully submitted,

COWAN LIEBOWITZ & LATMAN, P.C.
1133 Avenue of the Americas
New York, New York 10036
T (212) 790-9200


John J. Torrente
Reg. No. 26,359
Attorney of Record